

# National Board of Examinations

<b>Question Paper Name :</b>	DNB Physiology Paper2
<b>Subject Name :</b>	DNB Physiology Paper2
<b>Creation Date :</b>	2024-05-16 18:57:01
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## DNB Physiology Paper2

<b>Group Number :</b>	1
<b>Group Id :</b>	3271872029
<b>Group Maximum Duration :</b>	0
<b>Group Minimum Duration :</b>	180
<b>Show Attended Group? :</b>	No
<b>Edit Attended Group? :</b>	No
<b>Group Marks :</b>	100
<b>Is this Group for Examiner? :</b>	No
<b>Examiner permission :</b>	Cant View
<b>Show Progress Bar? :</b>	No

## DNB Physiology Paper2

<b>Section Id :</b>	3271872032
<b>Section Number :</b>	1
<b>Section type :</b>	Offline

<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions to be attempted :</b>	10
<b>Section Marks :</b>	100
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Maximum Instruction Time :</b>	0
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	3271872036
<b>Question Shuffling Allowed :</b>	No
<b>Is Section Default? :</b>	null

**Question Number : 1 Question Id : 32718719932 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

**Please write your answers in the answer booklet within the allotted pages as follows:-**

Question Number	Answer to be attempted within	Question Number	Answer to be attempted within
Q. 1	Page 1-5	Q. 6	Page 26-30
Q. 2	Page 6-10	Q. 7	Page 31-35
Q. 3	Page 11-15	Q. 8	Page 36-40
Q. 4	Page 16-20	Q. 9	Page 41-45
Q. 5	Page 21-25	Q. 10	Page 46-50

1. With the help of well-labeled diagram(s), describe the pressure and volume changes that occur in left side of the heart during different phases of a normal cardiac cycle. [10]

**Question Number : 2 Question Id : 32718719933 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

Describe the neural control of breathing. Explain the effects of various lesions and brainstem transections on the spirometer tracings. [7+3]

**Question Number : 3 Question Id : 32718719934 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

Explain the physio-clinical significance of:

- a) Gastric mucosal bicarbonate barrier. [3]
- b) Diffusion Capacity of Lungs. [4]
- c) Surfactant. [3]

**Question Number : 4 Question Id : 32718719935 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

- a) Acclimatization to high altitude. [4]
- b) Use of clearance methods to quantify renal functions. [3]
- c) Esophageal manometry. [3]

**Question Number : 5 Question Id : 32718719936 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

Compare and contrast:

- a) Baroreceptors and Chemoreceptors. [4]
- b) Cold shock and Warm shock. [3]
- c) Pulmonary and Systemic circulation. [3]

**Question Number : 6 Question Id : 32718719937 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

Diagrammatically show the development of various formed elements of the blood from bone-marrow cells. Explain the role of hematopoietic stem cell niche in regulation of hemopoiesis. [5+5]

**Question Number : 7 Question Id : 32718719938 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

- a) Law of Laplace & its application in human body. [4]
- b) Outline the sources, functions and deficiency symptoms of major vitamins that are essential to human nutrition. [6]

**Question Number : 8 Question Id : 32718719939 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

Explain why drinking of sea water causes dehydration in humans? Describe the steps involved in producing hyperosmotic renal medullary interstitium. Explain the role of distal tubule and collecting ducts in excreting concentrated urine. [2+5+3]

**Question Number : 9 Question Id : 32718719940 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

Explain the physiological mechanism underlying:

- a) Formation of platelet plug. [3]
- b) Parasympathetic tone being dominant in the control of heart rate. [3]
- c) Plasticity of the urinary bladder wall. [4]

**Question Number : 10 Question Id : 32718719941 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Correct Marks : 10**

- a) Hepatic encephalopathy. [3]

b) Transfusion reactions. [4]

c) Respiratory acidosis and respiratory alkalosis. [3]